

WHAT IS CLAIMED IS:

1. A fertile transgenic Zea mays plant containing an effective amino acid-elevating amount of an expressed recombinant gene encoding a seed storage protein, which gene is heritable.
2. The plant of claim 1 wherein the recombinant gene encodes a 10 kD zein protein, which is expressed so that the level of whole kernel methionine is substantially elevated above the whole kernel methionine level in the corresponding Zea mays plant wherein said recombinant gene is absent.
3. The plant of claim 1 selected from the group consisting essentially of field corn, popcorn, sweet corn, flint corn, and dent corn.
4. The plant of claim 1 wherein said recombinant gene also expresses a selectable marker gene or a reporter gene.
5. The plant of claim 4 wherein the selectable marker gene confers resistance or tolerance to a compound selected from the group consisting of hygromycin, kanamycin, G418, 2,2-dichloropropionic acid, neomycin, sethoxydim, haloxyfop, phosphinothricin, glyphosate, methotrexate, imidazolinone herbicides, sulfonylurea herbicides, triazolopyrimidine herbicides, s-triazine herbicides and bromoxynil.
6. The plant of claim 5 wherein the selectable marker gene confers resistance or tolerance to hygromycin.

7. The plant of claim 4 which expresses a reporter gene.
8. The seed produced by the plant of claims 1, 2 or 4 which has inherited the recombinant gene.
9. The R1 and subsequent generations derived from the plant of claims 1, 2 or 4.